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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/930,485

08/16/2001

Timo Pinola

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EXAMINER

NGUYEN, SIMON

ART UNIT

PAPER NUMBER

2685

DATE MAILED: 08/11/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Handwritten signature

Office Action Summary

Application No.

09/930,485

Applicant(s)

PINOLA, TIMO

Examiner

SIMON D NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-24 and 26-36 is/are rejected.
- 7) ☒ Claim(s) 7 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 6, 8-12, 14-20, 24, 26-30, 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molinari et al. (6,308,065) in view of Naslund (6,223,031).

Regarding claim 1, Molinari discloses a method for testing channel of a base station in a cellular radio network (fig.1, abstract), the method comprising: directing by a base station controller (#16), a base station (#12) transmits a control channel on at least one physical channel (voice channel) (fig.2, column 3 line 53 to column 4 line 26); directing a fixed receiver box (base station tester 10) to receive and measure the physical channel (figs. 1-2, column 4 lines 44-67, column 5 lines 1-65); transmitting a measurement report back to the controller (fig.2, column 6 lines 3-4). However, Molinari does not specifically disclose that the BSC select good signals and direct the base station to use the good one.

Naslund discloses a system for determining the quality of channels that are used for uplink and downlink channels (abstract) in which each base station having a measurement receiver for measuring the quality of each channel and reporting to a BS controller (fig.5), wherein the BSC for selecting and directing a base station to use one

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of the best channels (column 10 line 53 column 11 line 8, column 11 line 64 to column 12 line 1). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the Molinari system with the teaching of Naslund to control channel allocation in the system in order to perform the update of channels.

Regarding claims 19, this claim is rejected for the same reason as set forth in claim 1.

Regarding claims 2 and 20, in the modified Molinary system, Molinari discloses the base station tester is connected to the BSC via a fixed data network (fig.1).

Regarding claims 6 and 24, in the modified Molinary system, Molinari discloses the base station tester is controlled in real time (column 4 line 66).

Regarding claims 8 and 26, in the modified Molinary system, Molinari discloses the base station tester is capable of receiving physical channels (voice or traffic channel) implemented in different ways (fig.4, column 8 lines 36-38).

Regarding claims 9 and 27, in the modified Molinary system, Molinari discloses the base station uses various power levels in transmitting the physical channel (column 7 line 52 to column 8 line 20).

Regarding claims 10 and 28, in the modified Molinary system, Molinari discloses the channel configuration is performed when building the network (column 4 lines 15-17) and at regular intervals (out-of-service or in-service maintenance) (column 4 lines 14-18).

Regarding claims 11 and 29, in the modified Molinary system, Molinary discloses the base station can be tested under a variety of circumstances at the cell site including

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acceptance testing during a new installation, out of service maintenance, and in-service maintenance (column 4 lines 14-17). However, the modified Molinary system does not specifically disclose the base station perform at regular intervals. It should be noted that Molinary discloses the channel testing can be performed under a variety of circumstances which is obvious to include at regular intervals which is known to one skilled in the art in order to improve the system performance.

Regarding claims 12, 14, 17, 30, 32, and 35, in the modified Molinari system, Molinari fails to disclose the wireless network having micro cells and macro cells and the control channel is a BCCH .

Naslund discloses a wireless system in which the base station having a measurement receiver (#201 of fig.5) for signal quality determination to be used in the system (figs. 1, 5, column 8 lines 42-67), wherein the system includes micro cells and macro cells (fig.3, column 13 lines 40-44) and a BCCH (column 2 line 1). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Molinari, modified by Naslund to make measurement channel for different cell lay out in order to improve the system performance.

Regarding claims 15 and 33, in the modified Molinari system, Molinari discloses the BSC controls all activities in the base stations including the measurements of channels (column 4 lines 5-67, column 8 lines 21-51) which means the channel configuration of all base station of the network is performed according to a preliminary channel configuration plan.

Regarding claims 16 and 34, in the modified Molinari system, Molinari discloses the link signal contains a voice channel and a control channel (column 4 line 1) and wherein the system includes a TDMA system (fig.4, column 1 line 33) which means the system inherently use time slots.

Regarding claims 18 and 36, in the modified Molinari system, Molinari disclose the base station tester locating near the base station to measure the uplink and downlink channels transmitting and receiving from a mobile unit (fig.1) which means the base station tester is placed in the premises of the user of the network.

3. Claims 3-4 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molinari et al. (6,308,065) in view of Naslund (6,223,031) and further in view of Rahman (6,445,916).

Regarding claims 3-4 and 21-22, the modified Molinari system fails to disclose the network including an IP network and the base station tester has its own IP address.

Rahman discloses a communication system in which the BS controller performs channel allocation to each base station based on uplink and downlink channel measurement at mobile stations and the base station (fig.1) wherein the channel measurer at the base station and the mobile stations having IP addresses (column 4 lines 36-50, column 5 lines 35-48). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have the modified Molinari system, modified by the teaching of Rahman to assign an IP address to each base station tester

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in order to easily track signal performance, faster for service evaluation that can reliably operate in a changeable quality of service environment.

4. Claims 5, 13, 23, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molinari et al. (6,308,065) in view of Naslund (6,223,031) and further in view of Jones (5,752,164).

Regarding claims 5 and 23, in the modified Molinari system, Molinari discloses the base station tester is connected to the controller via a bi-directional data transmission link (column 3 line 61). However, the modified Molinari system does not specifically disclose the link is a wireless.

Jones discloses a test mobile unit (TMU 68 fig.1, 3) connected to the controller (concentrator 53) (column 7 lines 10-11) wherein the test mobile unit is a wireless bi-directional transmission link (figs.1, 3. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have the modified Molinari system, modified by Jones to make measurement while the physical channel transmitted through air in order to average out attenuation and multi-path effects.

Regarding claims 13 and 31, the Molinari system does not specifically disclose the base station is office base station.

Jones discloses the base station is an office base station (indoor) (fig.1, column 24 lines 55,67). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have the modified Molinari system, modified by Jones to

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wirelessly communicates mobile devices inside a building or office in order to improve signal selection to be used which reduces an undesired signal.

Allowable Subject Matter

5. Claims 7 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 7 and 25, the prior art of record fails to disclose a receiver box (channel measurement box) use a directed antenna beam in receiving one after the other a channel in various geographical locations.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (703) 308-1116. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Simon Nguyen

August 2, 2003

A handwritten signature in black ink that reads "Simon Nguyen". The signature is written in a cursive, flowing style.